An Earth Science Vision
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Global Understanding of the Complexities of Our Planet
--
An International Challenge

A Panel Discussion

IGARSS 2003 Toulouse, France

21 July 2003

International and Interagency Cooperative Development
A Perspective on International Cooperation

A panel discussion on the development of architectures for cooperative Earth observation systems and integrated modeling capabilities.

Participants

Conveners

G. Paules	NASA
D. Goodenough	Natural Resources Canada

Members

Prof. Jose Achache	Director of Earth Observation Programs, ESA
Mr. John Cunningham	Director, NPOESS Integrated Program Office
Dr. Tetsuya Sato	Director, Earth Simulator Center of Japan

The Forecasting Challenge

- **Earth System Model:** *The potential for predicting future variability and change in the Earth environment using integrated Earth System Modeling*
- **Ocean & Atmosphere:** *Predicting monthly to seasonal climate variability and the oceanic and atmospheric causes and effects*
- **Biosphere: A decadal vision:** *Predicting biosphere-climate interactions and the availability of fresh water under the influence of climate change including the effects induced by humans*
- **Solid Earth:** *Predicting solid Earth interactions with climate and the effects on habitability of Earth*
- **Climate Change:** *Bringing awareness to an international scale: potential implications of our coming understanding of the causes and effects of climate variability and change*

Earth Science Modeling Framework

A coupled global perspective of the earth as a system that serves both 'curiosity-driven' science and relevant near term applications

…by…

- Employing 'cross-theme' observing strategies
  - that provide robust and timely decision support information
  - using direct and integrated observations—a 'sensorweb'
- Allowing data ingestion and assimilation from greatly distributed sources
  - providing seamless acquisition and long term data and information storage
  - possibly 'federated depositories'

…that…

- Operates through a heterogeneous versus a centralized information systems architecture
  - that is open and evolvable

Earth Observation Summit

- Hosted by U. S. Government in Washington, D.C. on July 31, 2003
- Senior international government and non-government leaders in climate science, technology, and environment
- To obtain international support for a system of integrate space-borne, airborne, and *in situ* observations, to help understand and address global, environmental and economic concerns

(www.earthobservationssummit.gov)